PROJECT PROFILE

GREEN INDUSTRIAL RETROFIT

Ontario

SAN-TED Inc.

Brantford, Ontario

> *“The purchase of our heat recovery equipment gave us the ability to minimize our consumption of natural gas by extracting heat from our effluent to heat up our incoming water supply. Also the new supply of hot water increased the output from our existing machinery by 15 per cent”*

Ted Lowther,
Vice-President, San-Ted Inc.

THE COMPANY

San-Ted, founded in 1980, dyes and finishes knitted fabric for the Canadian clothing market. Production in the privately-owned company has risen recently by about 20 per cent per year because of an increase in exports to the U.S.A.

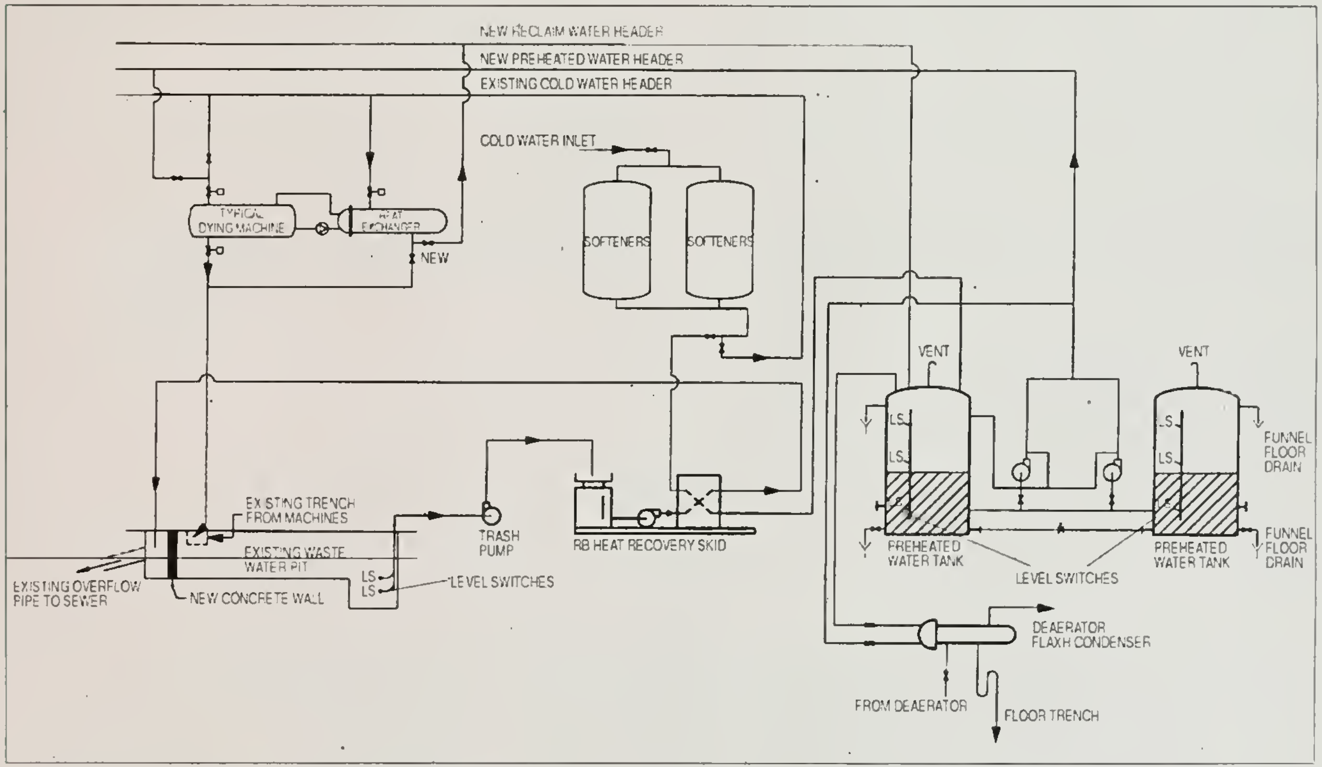
Like many other operators of dye houses, San-Ted uses standard dyeing, finishing and drying equipment. The company's utility bills are significant.

CHALLENGE

In 1993 San-Ted took the time to study its operations and find places where it could save money as well as protect the environment. The company found two opportunities to reduce costs and as well as to conserve energy and water.

1. In the old process, the clean, cooling water for the dye machines was discharged directly into the sewer. By recycling this water, the company would reduce its water and sewer costs as well as benefit by retaining the heat in the water.
2. By installing a heat exchanger, the company could recover the heat from the dye waste water. The heat exchanger would cool the effluent before it was discharged into the sewer and transfer the heat to incoming fresh water for the production process.

San-Ted called in TGL Corporation of Mississauga which specializes in energy recovery systems for the dyeing and laundry industries. After studying San-Ted's dyeing procedures as well as its energy and water consumption, TGL confirmed that the company could save a significant amount of money.



SAN-TED cooling water reclamation and wastewater heat recovery

OPPORTUNITIES

In brief, San-Ted could improve its productivity and lower its operating costs. Further, it could reduce:

- its water and energy use;
- its use of chemicals;
- the amount of lint and suspended solids as well as the biological oxygen demand of the water it sent to the sewer;
- the volume of water discharged into the sewer.

ACTION TAKEN

The company installed a Sofame RB 74 cooling, water recycling and waste water heat recovery system at a cost of $175,000.

The waste water system was prepackaged and skid mounted. The system included a stainless steel vibrating screen filter, plate and frame heat exchanger and pumps and PLC controls.

The recycling system included two 6,000 gallon stainless steel tanks and pipes. It has the capacity to handle the fluctuations in flow from the dye house.

RESULTS

San-Ted is now realizing the benefits of the retrofit.

1. The company's use of water has dropped by 16 per cent for an annual savings of more than $20,000.
2. By recovering the heat from the cooling water for the dye machines, the company saves more than $18,000 in natural gas costs.
3. By using a heat exchanger to recover the heat in the waste water from the dye machines, the company saves about $25,000 per year in natural gas costs.
4. By filling the dye machines with preheated water and so reducing cycle times, the company has improved its productivity and increased production by 15 per cent.

REPLICATION OPPORTUNITIES

Laundries and dye houses across Ontario could benefit from reduced water and energy consumption.

FOR FURTHER INFORMATION, PLEASE CONTACT

Ted Lowther
San-Ted International, 125 Easton Rd.
Brantford, Ontario N3P 1J4
Tel (519) 759-1340

Ted Litwin
TGL Corporation, Suite 1703
2155 Burnamthorpe Rd. W.
Mississauga, Ontario L5L 5P4
Tel (905) 569-6984

Don Maclean
Industry Conservation Branch
Ministry of Environment and Energy
56 Wellesley St. W., 14th Floor
Toronto, Ontario M7A 2B7
Tel (416) 327-1452
Fax (416) 327-1261

PARTNERSHIP IN POLLUTION PREVENTION AND RESOURCE CONSERVATION

Industrial companies located in Ontario may participate in ministry/industry programs that will help them to:

- use energy and water more efficiently;
- reduce, reuse and recycle solid waste;
- reduce or eliminate liquid effluent and gaseous emissions.

Equipment and services supply companies can benefit from the information provided on technologies identified for business development.

MINISTRY OF ENVIRONMENT AND ENERGY PROGRAMS

For information on Ministry of Environment and Energy assistance to industry, please contact the Industry Conservation Branch at (416) 327-1492, Fax (416) 327-1261

Publication of this project profile does not imply product endorsement. The ministry does not warrant the accuracy of contents and cannot guarantee or assume any liability for the effectiveness or economic benefits of the recommendations or the technologies described herein or that their use does not infringe privately owned rights.

In addition, the ministry cannot be held liable for any injury or damage to any person or property as a result of the implementation of any part of this profile.

This project profile was prepared and published as a public service by Ontario Ministry of Environment and Energy. Its purpose is to transfer information to Ontario companies about industries which have undertaken retrofits that improve the environment and their bottom line.

Renseignements en français :
Ministère de l'Environnement et de l'Énergie
56 rue Wellesley ouest, Toronto (Ontario)
M7A 2B7
Téléphone : (416) 327-1243 ou
Télécopieur : (416) 327-1261

Printed on recycled paper